

Appln No. 09/643,921
Amdt date May 27, 2005
Reply to Office action of April 11, 2005

REMARKS/ARGUMENTS

Claims 1-4, 17-20, 33, 35-37, 49-52, 63-66, 77-80, and 93-96 are pending. Claims 1, 17, 33, 49, 63, 77, and 93 are amended.

Claims 3, 4, 19 and 20 are allowed. Claims 36, 37, 51, 52, 65, 66, 79, 80, and 96 are deemed allowable if re-written in an independent form including all of the limitations of their base claims and any intervening claims.

Claims 1, 17, 33, 49, 63, 77, 93, and 95 are rejected under 35 U.S.C. 102(b) as being anticipated by Hamilton (U.S. 5,721,923); claims 2, 18, 35, 50, 64, 78, and 94 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamilton in view of Rust et al. (U.S. 5,263,083). Applicant submits that all of the claims currently pending in this application are patentably distinguishable over the cited references, and reconsideration and allowance of this application are respectfully requested.

Amended independent claims 1, 33, 49, and 77 include, among other limitations, estimating "signal processing complexity based on characteristics of the signal." Hamilton does not disclose the above limitation.

Rather, Hamilton describes a technique for allocating resources in a call processing system whereby different levels of resources are allocated depending upon the available headroom in the system. Hamilton makes it clear that his resource allocation based on headroom is not the same as estimating signal processing complexity based on characteristics of the signal.

Appln No. 09/643,921

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In Hamilton, a "system manager, assigns the resources to calls as needed, keeps track of resources surrendered by calls which no longer require such resources, and keeps track of the amount of memory and computational power used by each resource. It is also aware of the total amount of memory and computational power available to the entire system and therefore, the total amount of system headroom." (Col. 2, lines 32-40). "For example, if a relatively large percentage of available resources are in use, then only a simple echo cancelling filter, which utilizes a relatively small amount of processing power and memory, will be assigned." (Col. 2, lines 48-52, underlining is added.).

Furthermore, Hamilton emphasis that "the resource level allocated varies depending upon the amount of headroom. Headroom, in different embodiments of the invention, may be measured as (i) the total number of system channels minus the number of active channels, (ii) the total number of system channels, minus the number of channels using a particular resource, (iii) the total amount of CPU power and/or memory, minus that being used presently or (iv) some other way including a combination of one or more of the above. However, headroom is some measure of the level of system activity. By assigning resource levels based upon headroom, the system resources are dynamically allocated among the different telephone calls as needed." (Col. 2, line 62 to col. 3, line 7, underlining is added.).

Therefore, Hamilton does not disclose the above limitation of "signal processing complexity based on characteristics of the

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signal," required by claims 1, 33, 49, and 77. Accordingly, amended independent claims 1, 33, 49, and 77 are not anticipated by Hamilton.

Amended independent claims 17, 63, and 93 include, among other limitations, "estimating average complexity of each of the [signal processing in claims 17 and 93 only] functions by comparing a first signal to a second signal." Hamilton does not disclose the above limitation.

As discussed above, first, Hamilton does not estimate average complexity of each of the functions. Rather, it "assigns the resources to calls as needed, keeps track of resources surrendered by calls which no longer require such resources, and keeps track of the amount of memory and computational power used by each resource." Second, Hamilton does not estimate average complexity of each of the functions by comparing a first signal to a second signal. As discussed above, the "dynamic resource allocation" of Hamilton is based on available headroom in the system. Accordingly, amended independent claims 17, 63, and 94 are not anticipated by Hamilton.

In short, the independent claims 1, 17, 33, 49, 63, 77, and 93 define a novel and unobvious invention over the cited references. Dependent claims 2, 4, 18-19, 35-37, 50-52, 64-66, 78-80, and 94-96 are dependent from independent claims 1, 17, 33, 49, 63, 77, and 93, respectively and include all the limitations of their respective independent claims and additional limitations therein. Accordingly, these claims are also allowable over the cited references, as being dependent

Appln No. 09/643,921

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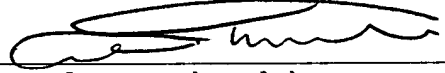
Reply to Office action of April 11, 2005

from allowable independent claims and for the additional limitations they include therein.

In view of the foregoing remarks, it is respectfully submitted that this application is now in condition for allowance, and accordingly, reconsideration and allowance are respectfully requested.

Respectfully submitted,
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